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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,606	07/10/2003	Mario Schroeder	MSA 256	3460
7590 HORST KASPER 13 FOREST DRIVE WARREN, NJ 07059		09/06/2007	EXAMINER KAO, CHIH CHENG G	
			ART UNIT 2882	PAPER NUMBER
			MAIL DATE 09/06/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/616,606	<b>Applicant(s)</b> SCHROEDER ET AL.	
	<b>Examiner</b> Chih-Cheng Glen Kao	<b>Art Unit</b> 2882	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 August 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9, 12-16, 18-24, 40-42 and 44-59 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1, 2, 9, 19, 23, 45-47, 49, 50 and 53-56 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 3-8, 12-16, 18, 20-22, 24, 40-42, 44, 48, 51, 52 and 57-59 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                            |                                                                                         |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                           | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____                                                |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers filed under 35 U.S.C. 119 (a)-(d) based on an application filed in Germany on July 12, 2002 and filed in Europe on July 8, 2003. Applicant has not complied with the requirements of 37 CFR 1.63(c), since the oath, declaration or application data sheet does not acknowledge the filing of any foreign application. A new oath, declaration or application data sheet is required in the body of which the present application should be identified by application number and filing date.

Although Applicant stated in Applicant's Remarks, filed August 13, 2007, that a new declaration was being prepared for execution, such a declaration has not yet been received by the Office. Therefore, Applicant has not yet complied with the requirements of 37 CFR 1.63(c).

### *Ex Parte Qualye*

2. This application is in condition for allowance except for the following formal matters.

### *Claim Objections*

3. Claims 3-8, 12-16, 18, 20-22, 24, 40-42, 44, 48, 51, 52, and 57-59 are objected to because of the following informalities, which appear to be minor draft errors including grammatical and/or lack of antecedent basis problems.

In the following format (location of objection; suggestion for correction), the following correction(s) may obviate the objection(s): (claim 3, line 2; deleting the hyphen before "when"),

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(claim 8, line 8, in the phrase “structure,”; replacing the comma with a semi-colon), (claim 8, line 13, in the phrase “coordinate measuring instrument,”; replacing the comma with a semi-colon), (claim 8, line 17, in the phrase “tolerance deviation at most,”; replacing the comma with a semi-colon), (claim 12, line 7; inserting a comma before “or an ultrasonic”), (claim 12, line 20; deleting the period after “by”), (claim 13, line 27, in the phrase “target position of the structure,”; replacing the comma with a semi-colon), (claim 13, line 32, in the phrase “coordinate measuring instrument,”; replacing the comma with a semi-colon), (claim 13, line 35, in the phrase “tolerance deviation at most,”; replacing the comma with a semi-colon), (claim 13, line 45, in the phrase “(i).”; replacing the period with a comma), (claim 14, line 20; deleting the period after “CT”), (claim 14, line 24, in the phrase “active detector surface,”; replacing the comma with a semi-colon), (claim 14, line 30, in the phrase “most, and”; replacing the comma with a semi-colon), (claim 16, line 3; deleting the dash), (claim 20, line 12, in the phrase “a target, position”; deleting the comma), (claim 21, line 25; replacing “allows” with --is used--), (claim 24, line 5, in the phrase “the axis, of rotation”; deleting the comma), (claim 40, line 9; inserting --a)-- before “coordinates of the object”), (claim 40, line 11; replacing “a” with --b)--), (claim 40, line 14; replacing “b” with --c)--), (claim 40, line 16; replacing “c” with --d)--), (claim 41, line 8; replacing “ML” with --MI--), (claim 41, line 21; replacing “allows” with --is used--), (claim 48, line 3; deleting the period after “CT”), (claim 51, line 4; deleting the period after “and”), and (claim 52, line 4; replacing the comma with a period).

Claims 4-7, 15, 18, 22, 42, 44, and 57-59 are objected to by virtue of their dependency. For purposes of examination, the claims have been treated as such. Appropriate correction is required.

4. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 25 USPQ 74, 453 O.G. 213, (Comm'r Pat. 1935).

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

***Allowable Subject Matter***

5. Claims 1, 2, 9, 19, 23, 45-47, 49, 50, and 53-56 are allowed. Claims 3-8, 12-16, 18, 20-22, 24, 40-42, 44, 48, 51, 52, and 57-59 would be allowable if rewritten or amended to overcome the respective claim objections set forth in this Office action. The following is a statement of reasons for the indication of allowable subject matter.

6. Regarding claim 1, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by a CT scanner, further characterized in that, by using the CT scanner, a three-dimensional digital CT image of a tolerance volume, including the structure, is created and stored as a CT data record, and the actual position of the structure is determined in a CT coordinate system on the basis of the CT data record, in combination with all of the other limitations in the claim. Claims 3-7, 9, 23, 24, 46, 47, 49, 55, and 56 contain allowable subject matter by virtue of their dependency.

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7. Regarding claim 2, the prior art fails to disclose of fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that, in addition to the actual position of the structure, a shape of the structure is also determined on the basis of a CT image or a CT data record, in combination with all of the other limitations in the claim. Claims 8, 9, 23, and 24 contain allowable subject matter by virtue of their dependency.

8. Regarding claim 12, the prior art fails to disclose of fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that, by using a CT scanner, a three-dimensional digital CT image of a tolerance volume, including the structure, is created and stored as a CT data record, and the actual position of the structure is determined in a CT coordinate system on the basis of the CT data record, in combination with all of the other limitations in the claim.

9. Regarding claim 13, the prior art fails to disclose of fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein the object to be examined is positioned relative to a coordinate measuring instrument by means of a traveling mechanism, using a target position of a structure obtained by means of step

(iii) with respect to an MI coordinate system, in such a way that a tolerance volume and thus also a structure lie within an area that is detectable by the coordinate measuring instrument, and using the coordinate measuring instrument, a three-dimensional digital image of a tolerance area, including the structure, is created and stored as an MI data record, and the actual position of the structure is determined in the MI coordinate system on the basis of the MI data record, in combination with all of the other limitations in the claim.

10. Regarding claim 14, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein a relative position of the object to be examined is regulated with respect to a CT scanner by means of a traveling mechanism, using a target position of a structure obtained by means of step c) relative to a CT coordinate system, in such a way that a tolerance volume and thus also the structure lie within a volume that is detectable by the CT scanner, by means of the CT scanner, a three-dimensional digital CT image of the tolerance volume, including the structure, is created and stored as a CT data record, and the actual position of the structure is determined in the CT coordinate system on the basis of the CT data record, in combination with all of the other limitations in the claim. Claims 15, 16, and 18 contain allowable subject matter by virtue of their dependency.

11. Regarding claim 19, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way

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that a target position of a structure comes to lie within a volume detected by the CT scanner, further characterized in that, in addition to the actual position of the structure, a shape of the structure is also determined on the basis of a CT image or a CT data record, in combination with all of the other limitations in the claim. Claims 45, 48, and 50-54 contain allowable subject matter by virtue of their dependency.

12. Regarding claim 20, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that the shape of the structure is determined on the basis of a CT image or a CT data record, in combination with all of the other limitations in the claim. Claims 57-59 contain allowable subject matter by virtue of their dependency.

13. Regarding claim 21, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within an area that is detectable by a coordinate measuring instrument, further characterized in that a position of at least three selected space points of a calibration object is determined with a CT scanner in a CT coordinate system as well as with the coordinate measuring instrument in an MI coordinate system, and a comparison of results obtained allows to determine a relative location and a relative orientation of the CT



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coordinate system relative to the MI coordinate system, in combination with all of the other limitations in the claim. Claim 22 contains allowable subject matter by virtue of its dependency.

14. Regarding claim 40, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by a CT scanner, further characterized in that the shape of the structure is determined on the basis of a CT image or a CT data record, in combination with all of the other limitations in the claim. Claim 44 contains allowable subject matter by virtue of its dependency.

15. Regarding claim 41, the prior art fails to disclose or fairly suggest a process for determining an actual position of an object to be examined in a coordinate system, including wherein using a determination of step c), the object to be examined is positioned in such a way that a target position of a structure comes to lie within a volume detected by a CT scanner, further characterized in that a position of at least three selected space points of a calibration object is determined with the CT scanner in a CT coordinate system as well as with a coordinate measuring instrument in an MI coordinate system, and a comparison of results obtained allows to determine a relative location and a relative orientation of the CT coordinate system relative to the MI coordinate system, in combination with all of the other limitations in the claim. Claim 42 contains allowable subject matter by virtue of its dependency.

*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chih-Cheng Glen Kao whose telephone number is (571) 272-2492. The examiner can normally be reached on M - F (9 am to 5 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Chih-Cheng Glen Kao  
Primary Examiner  
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